4.7 HYDROLOGY AND WATER QUALITY

This section discusses the existing onshore and offshore hydrologic and water quality conditions within the Project region and site. This section also identifies significance criteria, assesses potential Project-related impacts on existing hydrologic and water conditions, and discusses recommended mitigation measures that are designed to reduce or eliminate adverse impacts.

4.7.1 Environmental Setting

Onshore

Within the western portion of the onshore cable route, the Project area drains directly to Morro Bay or to streams that drain to Morro Bay. To the east, the Project area drains to Los Osos Creek or to its tributaries. All of these water bodies are environmentally sensitive, and any increase in sediment from onshore erosion or discharge of a potentially toxic substance within any portion of their watersheds, may result in a significant impact.

The proposed fiber optic cable will be installed in the existing onshore conduit system from the Sandspit Beach parking lot to the existing San Luis Obispo Cable Station. The hydrologic environmental setting along the route is described below in three segments: shoreline to the Sandspit Beach parking lot; Sandspit Beach parking lot to the State Park/Pecho Valley Road boundary; and from that point to the existing cable station.

The area from the mean high tide line to the Sandspit Beach parking lot drains to highly-pervious sands and local depressions; it is unlikely that runoff from this area would reach Morro Bay.

The area from the Sandspit Beach parking lot to the Montaña de Oro State Park Boundary/Pecho Valley Road drains to highly-pervious sands and local depressions; it is very unlikely that runoff from this area would reach Morro Bay. The segment of this area that drains to the north along Pecho Valley Road flows to drop inlets at Montaña Way and is conveyed to infiltration basins before reaching Morro Bay.

The area from the Montaña de Oro State Park/Pecho Valley Road to the San Luis Obispo Cable Station drains northerly along Pecho Valley Road to Montaña Way and flows to drop inlets at Montaña Way. The drainage is then conveyed to infiltration basins before reaching Morro Bay. The segments on Pecho Valley Road north of Montaña Way and on Los Osos Valley Road to the top of the rise east of Doris Avenue

drain to drop inlets at the transition of Los Osos Valley Road and Pecho Valley Road. From this point, runoff is carried rapidly and directly to a wetland at the edge of Morro Bay. The area generally east of Doris Avenue drains to pervious sands and depressions that prevent or substantially slow the flow of runoff toward Morro Bay.

Offshore

The marine segment of the proposed Project is located within Estero Bay offshore Montaña de Oro State Park in water depths ranging from approximately 98 to 6,000 feet (ft) (30 to 1,830 meters [m]) Mean Lower Low Water (MLLW) (see Figure 4.7-1). The seafloor bottom of the proposed cable route is characterized by sedimentary substrate (coarse sand to silt) and both high-relief ($\geq$3 ft [$\geq$1 m]) and low-relief substrate (SAIC 2000).

Nearshore water quality is influenced by a number of factors, including local currents, nearby ocean outfalls and discharges, and freshwater inflow. Petroleum development activities, commercial vessel traffic, natural hydrocarbon seeps, river runoff, municipal wastewater outfalls and minor industrial outfalls all contribute to increased levels of nutrients, trace metals and synthetic organic contaminants in offshore waters. However, compared to coastal water of the Southern California Bight, anthropogenic (human-induced) inputs into the water of the Santa Maria Basin are fewer and, therefore, these marine waters are considered relatively clean.

The largest municipal outfall in the Project region is about 6 miles (10 km) to the north of the Project site and serves the combined communities of Morro Bay and Cayucos. Historically this outfall has had low impacts to local water and sediment quality beyond 50 ft (15 m) of the zone of initial dilution surrounding the outfall.

Nearshore ocean temperatures along the California coast north of Point Conception are largely influenced by the California and Davidson currents and the seasonal upwelling of deeper ocean water. Surface water temperatures within Estero Bay typically range from 48 to 68 degrees Fahrenheit (°F) (9 to 20 degrees Celsius [°C]) with a mean of 57 °F (14°C). The winds promote the offshore movement of the surface water mass and its subsequent replacement by the upwelling of cold, nutrient rich water from deeper layers. Seasonal upwelling plays an important role in temperature and nutrient cycling within the bay and along the entire coast of California. Upwelling is not, however, restricted temporally, and can occur at anytime during the year when the necessary wind conditions persist (Gerdes *et al*. 1974).

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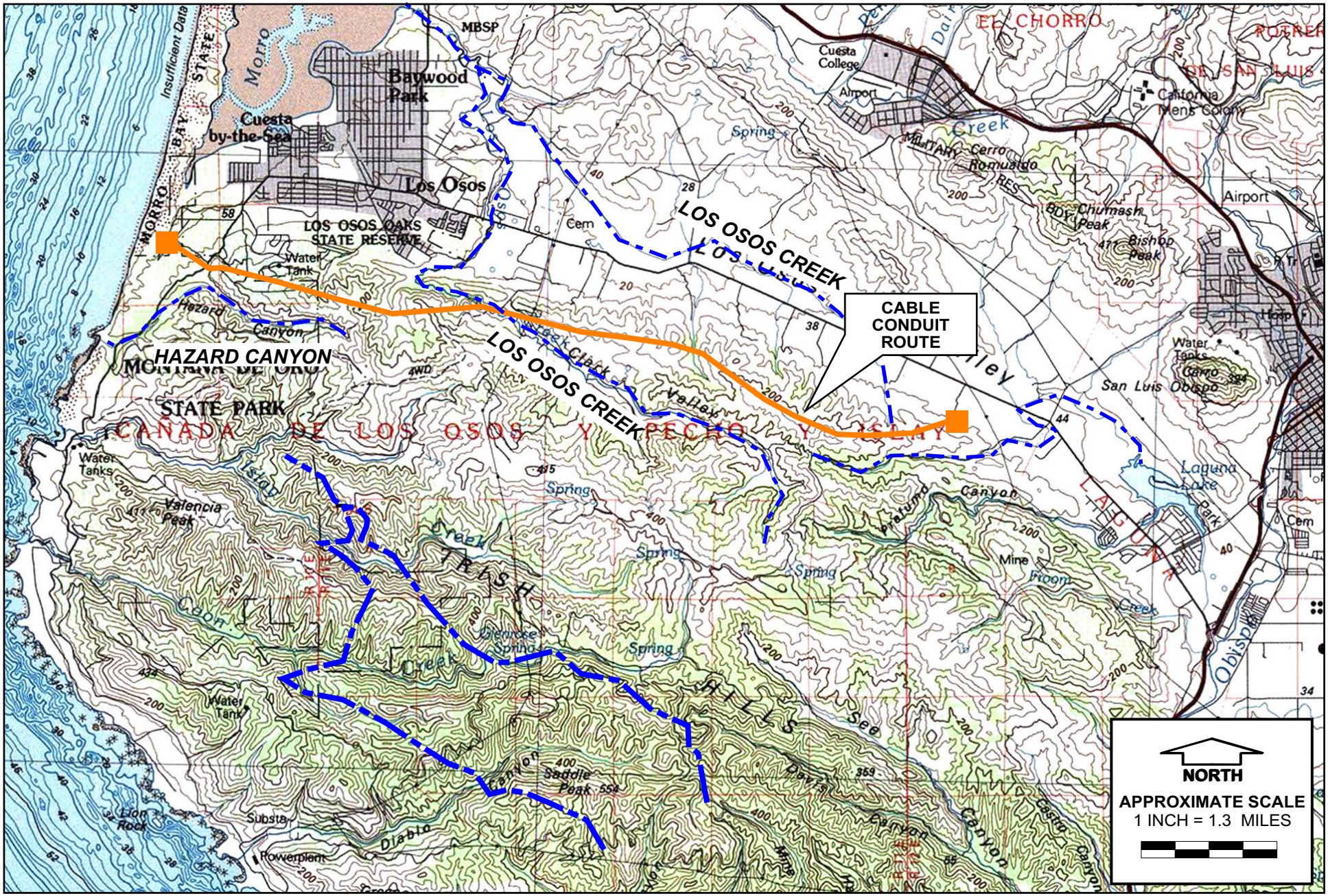

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ONSHORE HYDROLOGIC BASINS
FIGURE 4.7-1

1 Back of Figure

Contaminated sediments are not known or expected to occur in any of the areas crossed by the cables. The only known area of contaminated sediments is a World War II chemical and munitions dumping area approximately 60 miles (97 km) southwest of Morro Bay, outside Estero Bay. See Section 4.6.1, Environmental Setting, for additional discussion of sediment characteristics.

Wave Climate

Deep water offshore waves generally approach Estero Bay from the south to northwest; between 190° and 310° relative to azimuth true north (ACOE 1994). Point Estero to the north and Point Buchon to the south provide sheltering from waves traveling in directions outside that approach window. The United States (U.S.) Army Corps of Engineers' (ACOE) Navigation Improvements Design Memorandum (NIDM) (ACOE 1994) provides a summary of deep water hindcast wave data from the closest Wave Information Study (WIS) data set to Morro Bay for the years 1956-1975. Statistics from the WIS analysis are shown in Table 4.7-1.

Table 4.7-1. Deep Water WIS Hindcast Wave Data (ACOE 1994)

Parameter	Results
Mean significant wave height	8 ft (2.4 m)
Mean peak period	10.3 seconds
Most frequent wave direction	292.5° azimuth (re: True North)
Largest significant wave height	28 ft (8.5 m)
Peak period associated with highest wave	12.5 seconds

Source: PWA 2006

The NIDM (ACOE 1994) also discusses the collection and analysis of six months of nearshore wave data offshore Morro Bay and wave height predictions for extreme events. The measured nearshore wave data between September 1990 and March 1991, show that the directions of the incoming waves were predominately between 260° and 300° (PWA 2006). The majority of the observations between September 1990 and March 1991, documented the waves between 2 and 4 ft (0.6 and 1.2 m) with periods of 8 to 10 seconds from a direction of 270° (PWA 2006). The NIDM (ACOE 1994) also estimated extreme storm wave conditions and return periods for Morro Bay. These values are shown in Table 4.7-2.

Table 4.7-2. Extreme Wave Conditions

Return Period (Years)	Wave Height in Feet (m)
10	21.0 (6.4)
25	25.9 (7.9)
50	29.5 (9.0)
100	33.0 (10.1)

Source: PWA, 2006

Scripps Institute of Oceanography collects wave direction data at the Harvest Platform Buoy that is located 9 miles (14.5 km) west of Point Arguello (approximately 45 miles [72 km] south of the Project site). Although south of Estero Bay, directional wave data from this buoy can be reasonably considered as a source for characterizing offshore wave conditions offshore Morro Bay. The data include 10 years of measurements and show the highest number of occurrences in the wave direction bins of 293° and 315° and that the long period swell is mostly from the west northwest and northwest directions (PWA 2006). However, buoy data also show exposure to occasional long period swells directly from the south to the southwest, presumably from storms in the southern hemisphere.

4.7.2 Regulatory Setting

This section identifies and discusses the regulations and policies pertaining to hydrology and water quality that are administered by Federal and State agencies.

Federal Regulations

Clean Water Act of 1972

The Clean Water Act (CWA) is a comprehensive piece of legislation that generally includes reference to the Federal Water Pollution Control Act of 1972 and its substantial supplementation by the CWA of 1977. Overall, the CWA seeks to protect the nation's water from pollution by setting water quality standards for surface water and by limiting the discharge of effluents into waters of the United States. These water quality standards are enforced by the U.S. Environmental Protection Agency (EPA). The CWA also provides for development of municipal and industrial wastewater treatment standards and a permitting system to control wastewater discharges to surface waters. State operation of the program is encouraged. The CWA is the primary Federal statute governing the discharge of dredged and/or fill material into waters of the United States. Relevant sections include the following:

- Section 208 requires that states develop programs to identify and control nonpoint sources of pollution, including runoff;

- Section 230.8 gives authority to the ACOE and EPA to specify, in advance, sites that are either suitable or unsuitable for the discharge of dredged or fill material within U.S. waters;

- Section 303 requires states to establish and enforce water quality standards to protect and enhance beneficial uses of water for such purposes as recreation and fisheries;

- Section 304(a)(1) requires the administrator of the EPA to publish criteria for water quality that reflects the latest scientific knowledge regarding the effects of pollutants in any body of water;

- Section 313(a) requires that Federal agencies observe state and local water quality regulations;

- Section 401 applies to dredging and other in-water activities and requires certification that the permitted project complies with state water quality standards for actions within state waters. Under section 401, states must establish water quality standards for waters in the territorial sea. Dredging and other in-water activities may not cause the concentrations of chemicals in the water column to exceed state standards. To receive state certification, the applicant must demonstrate that these standards will not be exceeded;

- Section 401(a)(1) requires any applicant for a Federal permit (i.e., section 404) to provide certification from the state in which the discharge originates that such discharge will comply with applicable water quality provisions (i.e., section 303);

- Section 402 requires the EPA Administrator to develop the National Pollutant Discharge Elimination System (NPDES) to issue permits for pollutant discharges to waters of the U.S. A NPDES permit is required for: (1) any proposed point source wastewater or stormwater discharge to surface waters from municipal areas with a population of 100,000 or more; and (2) construction activities disturbing 1.0 acre (0.4 hectare) or more of land. A stormwater pollution prevention plan (SWPPP) is required for projects disturbing more than 1 acre (0.4 hectare), pursuant to the general permit for construction-related discharges;

- Section 404 establishes programs regulating the discharge of dredged and fill material into navigable waters of the United States. The CWA and Marine Protection, Research and Sanctuaries Act (MPRSA) overlap for discharges to the territorial sea. CWA supersedes MPRSA if dredged material is disposed of in the ocean for beach restoration or some other beneficial use. MPRSA supersedes CWA if dredged material is transported and disposed of in the territorial sea; and

- Section 404(b)(1) guidelines are the substantive criteria used in evaluating discharges of dredged or fill material under section 404.

Rivers and Harbors Act (33 U.S.C. § 401)

Section 10 of the Rivers and Harbors Act limits the construction of structures and the discharge of fill into navigable waters of the U.S.

Oil Pollution Act of 1990 (33 U.S.C. § 2712)

This act requires owners and operators of facilities that could cause substantial harm to the environment to prepare and submit plans for responding to worst-case discharges of oil and hazardous substances.

State Regulations

California Coastal Act of 1976

The California Coastal Act of 1976 created the California Coastal Commission and six area offices which are responsible for granting development permits for coastal projects and for determining consistency between Federal and State coastal management programs. They also administer a review of oil spill cleanup measures. The legislature also created the California Coastal Conservancy, which is authorized to take steps to preserve, enhance, and restore coastal resources and to address issues that regulations alone cannot resolve. The Commission's authority includes reviewing proposed actions that are within or could impact the coastal zone, as well as reviewing project actions for the integration of policies that are established by the California Coastal Act.

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act)

The Porter-Cologne Act (California Water Code § 13000 et seq.), which is the principal law governing water quality in California, establishes a comprehensive program to

protect water quality and the beneficial uses of State waters. The Act established the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB), which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The Porter-Cologne Act also implements many provisions of the Federal CWA, such as the NPDES permitting program. CWA § 401 gives the SWRCB the authority to review any proposed federally permitted or federally licensed activity which may impact water quality and to certify, condition, or deny the activity if it does not comply with State water quality standards. If the SWRCB imposes a condition on its certification, those conditions must be included in the Federal permit or license.

California Ocean Plan

The California Ocean Plan (SWRCB 2001) establishes water quality objectives for California's ocean waters and provides the basis for regulation of wastes discharged into the State's ocean and coastal waters. The SWRCB prepares and adopts the Ocean Plan, which incorporates the State water quality standards that apply to all NPDES permits for discharges to ocean waters; the SWRCB and the six coastal RWQCBs implement and interpret the Ocean Plan. The Ocean Plan is not applicable to vessel wastes or the control of dredged material (Ocean Plan Introduction, Section C.2).

Basin Plan

The Central Coast Region of the RWQCB has established a Water Quality Control Plan (Basin Plan) for coastal waters. A water quality control plan for the waters of an area is defined as having three components: beneficial uses which are to be protected, water quality objectives which protect those uses, and an implementation plan which accomplishes those objectives (California Water Code [CWC] § 13050). The RWQCB's Basin Plan standards incorporate the applicable portions of the California Ocean Plan and are more specific to the beneficial uses of marine waters adjacent to the Project site. The water quality objectives and toxic material limitations are designed to protect the beneficial uses of ocean waters, which are as follows:

- **Water Contact Recreation (REC-1).** Uses of water for recreational activities involving body contact for water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water skiing, skin and scuba diving, surfing, and fishing;

- **Non-Contact Water Recreation (REC-2)**. Uses of water for recreational activities involving proximity to water but not normally involving body contact with water, where ingestion of water is not reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities;

- **Industrial Service Supply (IND).** Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization;

- **Navigation (NAV).** Uses of water for shipping, travel, or other transportation by private, military, or commercial vessels;

- **Marine Habitat (MAR).** Uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife such as marine mammals and shorebirds;

- **Shellfish Harvesting (SHELL).** Uses of water that support habitats suitable for the collection of filter-feeding shellfish such as clams, oysters, and mussels, for human consumption, commercial, or sport purposes. This includes water that may have in the past or may in the future contain significant shellfisheries;

- **Ocean Commercial and Sport Fishing (COMM).** Uses of water for commercial or recreational collection of fish, shellfish, or other organisms including uses involving organisms intended for human consumption or bait purposes;

- **Rare, Threatened, or Endangered Species (RARE).** Uses of water that support habitats necessary at least in part for the survival and successful maintenance of plant or animal species established under State or Federal laws as rare, threatened, or endangered; and

- **Wildlife Habitat (WILD).** Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife, e.g., mammals, birds, reptiles, amphibians, invertebrates, or wildlife water and food sources.

Along with the Ocean Plan provisions, the RWQCB Basin Plan specifies additional objectives applicable to all ocean waters, including: (1) the mean annual dissolved oxygen concentration shall not be less than 7.0 milligrams per liter (mg/L), nor shall the minimum dissolved oxygen concentration be reduced below 5.0 mg/L at any time; and (2) the pH value shall not be depressed below 7.0, nor raised above 8.5.

4.7.3 Significance Criteria

Using the criteria found in Appendix G (Environmental Checklist) of the CEQA Guidelines, an adverse impact to hydrologic resources would be considered significant and would require mitigation if the proposed Project results in any of the following:

- Discharges that exceed the water quality objectives of the Central Coast Water Quality Control Plan;
- Violation of the water quality objectives contained in the California Ocean Plan;
- Violation of the water quality criteria in the California Toxics Rule;
- Results in a spill of petroleum products into the marine waters or onshore drainages;
- Substantially alters drainage patterns which would result in increased erosion or siltation;
- Substantially increases the rate or amount of surface run-off;
- Exposes people or structures to significant risk of loss, injury or death involving flooding; and,
- Places structures in a 100-year flood hazard zone that would impede or redirect flood flows.

4.7.4 Impact Analysis and Mitigation

The following section describes the potential hydrology and water quality impacts from the proposed Project. Significant impacts to onshore water quality were identified due to potential erosion and sedimentation from onshore construction activities. Mitigation measures have been included to reduce impacts to less than significant levels.

Surface Water Quality

Less Than Significant Impacts

Construction-Related. Onshore activities will occur along the existing onshore conduit system that extends from the Sandspit Beach parking lot to the San Luis Obispo Cable Station. The onshore activities for the Project include: accessing the various manholes along the route; placing the cable into the conduit; pulling a fiber optic cable and a power cable through the existing conduit system; and installing a new ground bed within the existing San Luis Obispo Cable Station. The repair of roadways or other corridor features as necessary to allow for installation of the new cable is also included in the proposed activities within this segment. No new construction is anticipated for this segment of the Project. Because no new construction is anticipated, the potential for accumulation of waste materials or toxic substances subject to surface water runoff will be less than significant (Class III).

Operations, Maintenance, and Abandonment. Fiber optic cables are inert and do not normally require maintenance, resulting in no impact on surface water quality under normal conditions. If repairs are needed at some time during the life of the Project, the impacts would be qualitatively similar to those occurring during cable installation, and would consist of potential soil disturbance impacts associated with the recovery of the cable from the conduit following repairs. These effects are expected to be local and temporary and are considered less than significant (Class III).

If the cable is removed upon abandonment in the future, water quality impacts would be essentially the same as those of installation. Abandonment in place would have no impact (Class III).

Potentially Significant Impacts

Impact WQ-1: Erosion and Sedimentation Impacts during Construction Activities

Construction during the wet season has the potential to result in potentially significant surface water quality impacts to sensitive water bodies and wetland areas (Class II).

Based on the drainage characteristics discussed above, construction during the wet season has the potential for significant impacts to water quality in sensitive water bodies and wetlands along the segment of the Project between Montaña Way and the crest of the hill east of Doris Avenue due to runoff, erosion, or a toxic spill. The following

mitigation measures are recommended in this segment if construction occurs during the wet season.

Mitigation Measure for Impact WQ-1: Runoff, Erosion, Toxic Spill

MM-WQ-1. **Prepare and Implement Storm Water Pollution Prevention Plan.** Prior to issuance of construction permits, AT&T shall submit evidence of an approved Storm Water Pollution Prevention Plan (SWPPP) covering all aspects of the Project and specifically addressing conditions and measures to be implemented to minimize the effects of erosion and/or a spill of toxic substances. The SWPPP should include but not be limited to spill contingency measures, vehicle and equipment maintenance, and any dewatering activities that become necessary in accessing manholes.

MM TERBIO-2e. **Spill Prevention and Contingency Plan.** AT&T or its construction contractor shall prepare and implement a Spill Prevention and Contingency Plan that includes provisions for avoiding and/or minimizing impacts to sensitive onshore habitat areas, wetlands and waterways of the Project area (i.e., Los Osos Creek and associated tributaries) due to spills during Project implementation. Specifically, the plan shall include but not be limited to the following provisions:

- All equipment fueling shall be conducted within the designated staging areas of the Project site. At no time shall any equipment fueling be conducted within 50 feet (15 m) of any wetland and/or existing waterway;

- An overview of the containment measures to appropriately store and contain all fuels and associated petroleum products during the Project shall be included in the plan. This shall include specific provisions for equipment staging areas, such as the need for drip pans underneath all parked equipment and designated storage areas for fuel dispensing equipment with visqueen lining and secondary containment; and,

- A description of the response equipment that will be on-site during construction and exact procedures for responding to any inadvertent spills including miscellaneous fuel and/or lubricant spills from construction equipment and vehicles during operations. Final specifications of the Spill Prevention and Contingency Plan shall be reviewed and approved by the CSLC, county and CDFG prior to Project implementation.

MM TERBIO-3c. **Erosion Control Monitoring.** To ensure that all repaired erosion features along the Rim Trail and any newly created erosion areas due to Project implementation are properly stabilized utilizing the erosion and sedimentation control measures outlined above, all repaired areas shall be monitored during the subsequent rainy season. Specifically, the following measures shall be implemented:

- All erosion repair areas (both minor and major) of the terrestrial cable route right-of-way shall be identified and numbered accordingly and illustrated on a site plan for easy reference;

- The stabilized erosion features shall be monitored for overall effectiveness during three significant storm events (>1-inch [>2.5 cm] rain in 24-hour period) during the pending subsequent season;

- Any erosion control deficiencies including, but not limited to rills, gullies, waterbar(s) failure, and localized slope failures shall be identified and appropriate corrective actions using the measures outlined above shall be delineated in a monitoring report;

- Copies of the monitoring report shall be provided to the appropriate regulatory agencies and landowner representatives;

- Recommended measures within the report shall be implemented immediately by an AT&T on-call contractor; and,

- Any areas requiring repair will be monitored using these same protocols the following rainy season.

Marine Water Quality

Less Than Significant Impacts

Construction-Related. No accumulation of contaminated material is expected to have occurred within the conduit and while brushes and other devices may be used to remove metallic material from the inner portion of the conduit, the discharge of those materials, which is likely to consist of sediment and small amounts of rust (insoluble iron oxide), is not expected to result in water quality degradation or an increase in contaminants that exceed the California Ocean Plan. Since these materials are non-toxic, no significant adverse effects on marine organisms or water quality are expected beyond the immediate area of physical disruption (Class III).

Based on the observations made during the project-specific Remotely Operated Vehicle (ROV) survey, the nearshore sediments at and around the conduit are expected to be sandy and not contaminated (AMS 2008). Settlement of the sandy material is expected to be rapid and within the immediate area of the disturbance, resulting in less than significant impacts (Class III) to the existing marine water quality and minor to short-term turbidity increases within the immediate area.

The pre-lay grapnel run, laying of the cable, jetting of sediments during cable installation, and use of the sea plow farther offshore, will result in local and temporary increases in turbidity. The dimensions and particle concentrations characterizing this turbidity plume depend on the initial disruptive forces generated by the equipment, sediment grain sizes and corresponding rates of settlement, and bottom currents (SAIC 2000). The turbidity effects are expected to be local, short-term and less than significant (Class III) with the resuspended sediments settling onto the seafloor shortly after the disturbance. The resuspended sediment along the cable corridors is expected to remain within about 3 ft (1 m) of the bottom (CSLC 1999b and Morro Group 1999, cited in SAIC 2000), and gradually re-settle to the seafloor. The finer fractions could remain suspended for several minutes to hours (CSLC 1999b and Morro Group 1999, cited in SAIC 2000), but would be dispersed away from the cable by bottom currents. Impacts from the discharge of ballast water into the marine waters of the Project area could also have potentially significant effects on water quality. AT&T has specified that no ballast water discharges will occur within 12 miles (19 km) of the shoreline, thus the potential effects have been mitigated to less than significant (Class III) through AT&T's proposed actions.

Operations, Maintenance and Abandonment. Fiber optic cables are inert and do not normally require maintenance, resulting in no impact on water quality under normal conditions. If repairs are needed at some time during the life of the Project, the impacts would be similar to those occurring during cable installation, and would consist of turbidity-related effects associated with the excavation, recovery, and re-burying of the cable following repairs. These effects are expected to be local and temporary and are considered less than significant (Class III).

If the cable is removed upon abandonment in the future, water quality impacts would be essentially the same as those of installation. Abandonment in place would have no impact.

Potentially Significant Impacts

Impact WQ-2: Effects of a Petroleum Discharge during Construction Activities.

A petroleum discharge during construction activities would result in significant impacts to water quality. (Class II)

Impacts to water quality of an accidental petroleum discharge are potentially significant, although unlikely to occur. While the risk of a spill is considered unlikely, without confinement and recovery, the effects of petroleum and/or other vessel discharge could be significant.

Mitigation Measure for Impact WQ-2: Petroleum Discharge

MM-WQ-2. **Prepare Spill Response and Recovery Plan.** Prior to laying any cable, AT&T shall require that the vessel operator prepare and have onboard the lay vessel and other larger construction vessels, an oil spill response plan, approved by the California Office of Spill Prevention and Response, that specifies equipment and actions that will be taken in the event of a petroleum spill.

Impact WQ-3: Discharge of contaminated water during conduit preparation activities.

Discharge of contaminated water during pipe preparation activities would result in significant impacts to water quality (Class II).

Similar to the projects assessed in EIRs for other cable projects (*i.e.* SAIC 2000), the only non-vessel discharge associated with the proposed Project would occur when the conduit is flushed, using air and possibly potable fresh water. This activity, and the excavation of an estimated 30 CY (23 m^3) of sediment around the conduit terminus, will disturb and resuspend bottom sediments resulting in an increase in water column turbidity. However, use of water containing residual chlorine by-products or other elevated contaminates could violate the RWQCB's Ocean Plan standards and result in an impact to water quality.

Mitigation Measure for Impact WQ-3: Discharge of contaminated water during pipe preparation activities

MM-WQ-3. **Water Quality Testing and Reporting for Pipe Flushing Water.** Prior to use, AT&T shall conduct chemical analytical testing of water proposed to be utilized for pipe preparation activities to ensure the water quality will not violate Ocean Plan water quality standards. Copies of the water quality analytical testing results shall be submitted to the California State Lands Commission or its environmental monitor and the Regional Water Quality Control Board for review and approval prior to discharge.

Rationale for Mitigation

The measures presented in this section provide improved protection of hydrology and water quality resources. These measures will reduce the effects on hydrology and water quality resources. The goal of the mitigation is to minimize, to the greatest extent feasible, hydrology and water quality impacts caused by the installation of the fiber optic cable.

Table 4.7-3. Summary of Hydrology and Water Quality Impacts and Mitigation Measures

Impact	Mitigation Measures
WQ-1: Erosion and sedimentation impacts during construction activities	**WQ-1:** Prepare and implement storm water pollution prevention plan. Implement **MM TERBIO-2e** Spill Prevention and Contingency Plan, and MM **TERBIO-3c** Erosion control monitoring.
WQ-2: Effects of a petroleum discharge during construction activities	**WQ-2:** Prepare spill response and recovery plan.
WQ-3: Discharge of contaminated water during pipe preparation activities	**WQ-3:** Water quality testing and reporting for pipe flushing water.

4.7.5 Impacts of Alternatives

The CEQA Guidelines emphasize that a selection of reasonable alternatives and an adequate assessment of these alternatives be presented to allow for a comparative analysis for consideration by decision-makers. Two alternatives are discussed for this EIR: (1) No Project Alternative, and (2) Cable Re-route/Maximum Burial Alternative.

No Project

The No Project Alternative would not result in any impacts to water quality within the site or region. However, existing erosion problems along the onshore conduit route would not be stabilized through implementation of mitigation measure MM-TERBIO-3c under the proposed Project. Without repairs the existing onshore erosion could be expected to continue and over a longer term could result in a potentially significant (Class I) impact.

Cable Re-route/Maximum Burial Alternative

This alternative would result in a less than significant increase in construction-related water quality impacts compared to the proposed Project. Impacts include those associated with sediment resuspension (turbidity), and from the accidental release of hazardous material such as petroleum. The Maximum Burial Alternative will result in a larger area of disturbance to the sedimentary seafloor, which will generate additional turbidity and a slight increase in the duration that the lay vessel and support vessels will be offshore, resulting in a slight increase in the potential for a fuel/oil spill. Settlement of the disturbed seafloor material is expected to be rapid and within the immediate area of the disturbance. Impacts to the existing marine water quality are limited to short-term turbidity increases within the immediate area. These impacts are similar to those

generated by the proposed project mitigable by the same measures that have been described above in Section 4.7.4, Impact Analysis and Mitigation, with respect to the proposed Project.

4.7.6 Cumulative Projects Impact Analysis

None of the cumulative projects is expected to have marine construction activities that will coincide with those of the proposed Project; therefore, no cumulative impacts on hydrology and water quality activities are anticipated. Onshore activities are anticipated to be less than significant with incorporation of mitigation measures. Cumulative projects onshore will also be required to comply with SWPPP as required by the RWQCB.

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